

# Breaking the Box: Beginning Design Technology

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Published in *Proceedings, 28th National Conference on the Beginning Design Student, The Pennsylvania State University, March 2012, p. 53-58.\**

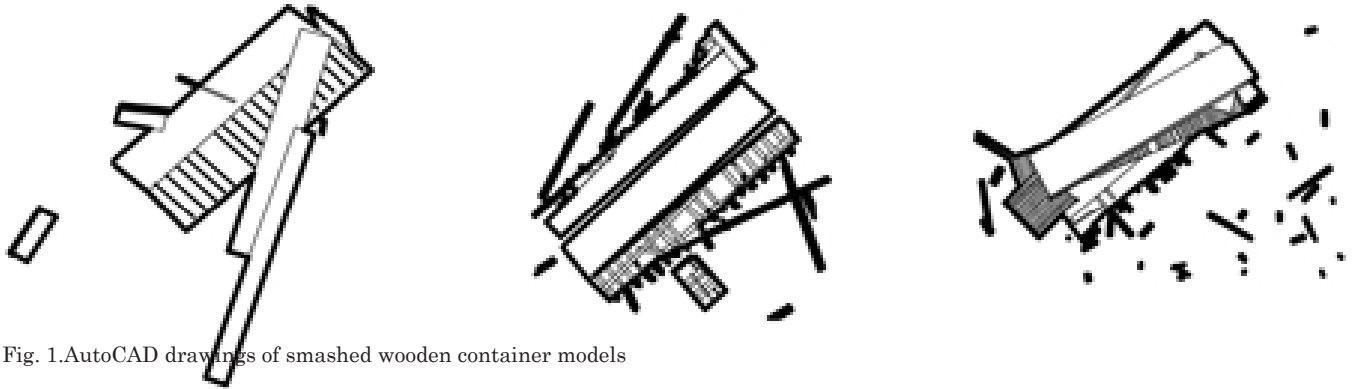


Fig. 1. AutoCAD drawings of smashed wooden container models

## Introduction

In 2011, a class of 54 students in the second year of North Dakota State University's five-year M. Arch. program engaged in a semester-long exercise in "Doing and Sustainable Making," as the core of an introductory course in Design Technology. The standard ISO shipping container constituted the vehicle for their investigation. Unlike conditions which might prevail in a design studio, the students in the Design Technology course were not asked to adapt the shipping container to a new function. Instead, their persistent task lay in an iterative cycle of building, destroying, mapping, recycling, casting, illuminating, and narrating: each successive iteration served the pedagogical purpose of introducing and testing a new technology of architectural representation. By the end of the semester, students were able to exhibit techniques and skills in plaster and concrete casting, parametric modeling software, rendering software, woodworking, laser-cutting, paper-folding, drafting and illustration software, and basic wiring and lighting.

The relevance of the Design Technology course to the beginning design student is simple: the techniques enabled students to proceed confidently in the presence of conflict, equipped with a set of core competencies. But most importantly, students completed the class with a understanding of media interoperability, interdependence, and specificity. Students appreciated each technology not only for its unique capabilities and limitations, but also for its ability to work in combination with others.

The course persistently encouraged students to make use of existing resources close at hand. Although the shipping container was not in the end converted into anything other than multiple translations of itself, its presence constantly reminded the students that even the most mundane of objects can serve as a form of inspiration for architectural making and critical thought. The class, ARCH 232, is a required component of NDSU's five-year professional M. Arch. degree program. This course is the second in a series of